

In the Claims

Please amend claims 1, 17, and 23. Please cancel claims 11 and 12.

The claims are as follows:

1. (Currently amended) A metering device comprising:

a material reservoir containing coating material;~~and~~

a metering element, operationally attached for engaging a compressible material line, thereby causing a selectable peristaltic effect upon the coating material in said compressible material line, wherein said material reservoir directly communicates with the compressible material line; and

a material dispensing end, moveably secured to said metering element, for movement with said metering element during dispensing.

2. (Original) The metering device of claim 1, further comprising a control system operatively attached to said metering element, where said control system allows for control of the selectable peristaltic effect and said metering element.

3. (Original) The metering device of claim 1, further comprising a base, said base adapted so that the compressible material line is positioned between said base and said metering element.

4. (Original) The metering device of claim 3, wherein said base comprises a depression for engagement with said compressible material line.

5. (Original) The metering device of claim 1, wherein said metering element is rotatable.

6. (Original) The metering device of claim 1, wherein said metering element is slidable.
7. (Original) The metering device of claim 1, wherein said metering element has an arcuate portion.
8. (Original) The metering device of claim 7, wherein said metering element is a cylinder.
9. (Original) The metering device of claim 8, wherein said metering element is a cylinder of a plurality of diameters.
10. (Original) The metering device of claim 1, further comprising the compressible material line.
11. (Cancelled).
12. (Cancelled).
13. (Original) The metering device of claim 12, wherein said material dispensing end is a dispensing needle.
14. (Withdrawn) The metering device of claim 12, further comprising a robotic positioning system operatively attached to said material dispensing end.

15. (Original) The metering device of claim 1, wherein said peristaltic effect causes a dispensing of a unit of material from said metering device.

16. (Original) The metering device of claim 15, wherein the quantity of said unit of dispensed material is within 2% of a desired quantity of material to be dispensed.

17. (Currently amended) A precision metering system comprising:

a material delivery unit including:

a material reservoir, a material dispensing end, a compressible material line connecting said material reservoir and said material dispensing end, and a valve, wherein the material dispensing end is moveably secured into the material delivery unit for movement with the material delivery unit during operation;

a base; and

a metering element, ~~adapted to engage~~ engaging most of the length of said compressible material line between said metering element and said base, thereby creating a peristaltic effect upon a material in said compressible material line, said peristaltic effect thereby causing a precision dispensing of a unit of material from said material dispensing end, wherein said unit of material is selectable.

18. (Original) The precision metering system of claim 17, further comprising a control system operatively attached to said metering element, wherein said control system allows for control of said metering element.

19. (Withdrawn) The precision metering system of claim 17, further comprising a robotic positioning system operatively attached to said material dispensing end.

20. (Original) The precision metering system of claim 17, wherein said metering element is a cylinder.

21. (Original) The precision metering system of claim 17, wherein said metering element is rotatable.

22. (Original) The precision metering system of claim 17, wherein said metering element is slidable.

23. (Currently amended) A metering device comprising:

a metering element that is one of translationally slidable and rotatable, operationally attached for engaging most of the length of a compressible material line, and upon said sliding or rotation causes a peristaltic effect upon a material located within said compressible material line further causing a precision dispensing of a unit of material from said device.

24. (Withdrawn) The metering device of claim 23, further comprising a control system operatively attached to said metering element, wherein said control system allows for user programmability of said metering element.

25. (Original) The metering device of claim 23, further comprising a base, wherein said compressible material line is positioned between said metering element and said base.

26. (Original) The metering device of claim 23, wherein said metering element is selectable.

27. (Withdrawn) A metering system comprising:

a metering device including:

base;

a metering element, adapted for engaging a compressible material line positioned between said metering element and said base, thereby causing a peristaltic effect upon a material in said compressible material line;

a control system operatively attached to said metering element, wherein said control system allows for control of said metering element; and

a robotic positioning system operatively attached to said metering device.

28. (Withdrawn) The metering system of claim 27, wherein said metering element is a rotatable cylinder.

29. (Withdrawn) The metering system of claim 27, wherein said robotic positioning system includes a gantry frame.

30. (Withdrawn) The metering system of claim 27, further comprising:

a material reservoir;

a material dispensing end; and

the compressible material line operatively attached therebetween.

31. (Previously presented) A method of precision dispensing of material comprising:

providing a device which includes a base and a metering element;

providing a reservoir;

inserting the reservoir into the device;

positioning a compressible material line between said metering element and said base;

moving one of said base, metering element, compressible material line, or a combination thereof, thereby causing a peristaltic effect upon a material within said compressible material line; and

dispensing a precise unit of material from said device.

32. (Original) The method of claim 31, wherein said metering element is a rotatable cylinder.

33. (Original) The method of claim 31, wherein said precise unit of material dispensed is within 2% of a quantity desired to be dispensed.